

ABSTRACT

An electron beam apparatus prevents a rapid increase of dosage caused by stoppage or deceleration of movement and protects the specimen when the specimen is irradiated with the electron beam while the specimen and the electron beam are being relatively moved. An electron beam source outputs the electron beam. The dosage of electron beam irradiated per unit area of the specimen is measured. A storage section stores a predetermined dosage per unit area in memory for the specimen. A detector detects over exposure of the electron beam when the measured dosage per unit area is greater than the dosage per unit area stored in the storage section. A controller controls the electron beam source to reduce the dosage per unit area of the electron beam lower than the dosage per unit area stored in the storage section.